

subsea 7



Seven Arctic – Investor Presentation

29th March 2017

Welcome Onboard Seven Arctic



Itinerary

- Welcome presentation
 - Oeyvind Mikaelson and Jonathan Tame
- Tour of the vessel in three groups
- Meet on the Bridge for refreshments and Q&A
- 15:45 Bus departs for the airport



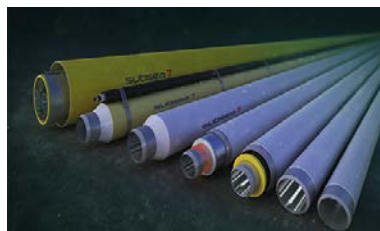
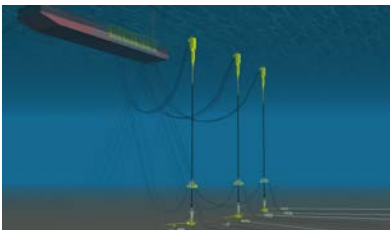
Oeyvind Mikaelson
EVP Commercial

Subsea 7 – In Summary

Subsea 7 is one of the world's leading global contractors in seabed-to-surface engineering, construction and services to the offshore industry.

We provide technical solutions to enable the delivery of complex projects in all water depths and challenging environments

Our vision is to be acknowledged by our clients, our people and our shareholders as the leading strategic partner in our market



2016 operational highlights

- Consistent and safe operational performance with several large projects successfully completed.
- Vessel utilisation 66% full year and 65% fourth quarter
 - Active vessel utilisation 80% full year, 78% fourth quarter
- Affirmed our position in offshore renewable energy
- **Substantially completed six-vessel new-build programme**
- Investment in new enabling and cost-reducing technologies
- Delivered cost reduction and resizing programme while maintaining differentiated expertise and capability.

Our asset investment strategy

- Modernising and enhancing our fleet is a long-term investment to maintain our competitive lead
- Each vessel has been designed to maximise efficiency, capacity and economy of the vessels
- Maintain the right fleet size and specification to meet the prevailing market conditions
- Part owned and part chartered fleet: gives operational flexibility and reduces the capital intensity of the fleet
- **Key vessels are owned to ensure full control over availability and specification**

Our key attributes differentiate us

- **People**

- Project delivery based on our expertise and know-how

- **Technology**

- Market driven and cost-effective solutions

- **Assets**

- A diverse fleet of vessels and strategically positioned global assets

- **Alliances and Partnerships**

- Collaborating to deliver optimal field development solutions

- **Local presence**

- Building strong local businesses and embedding local capability

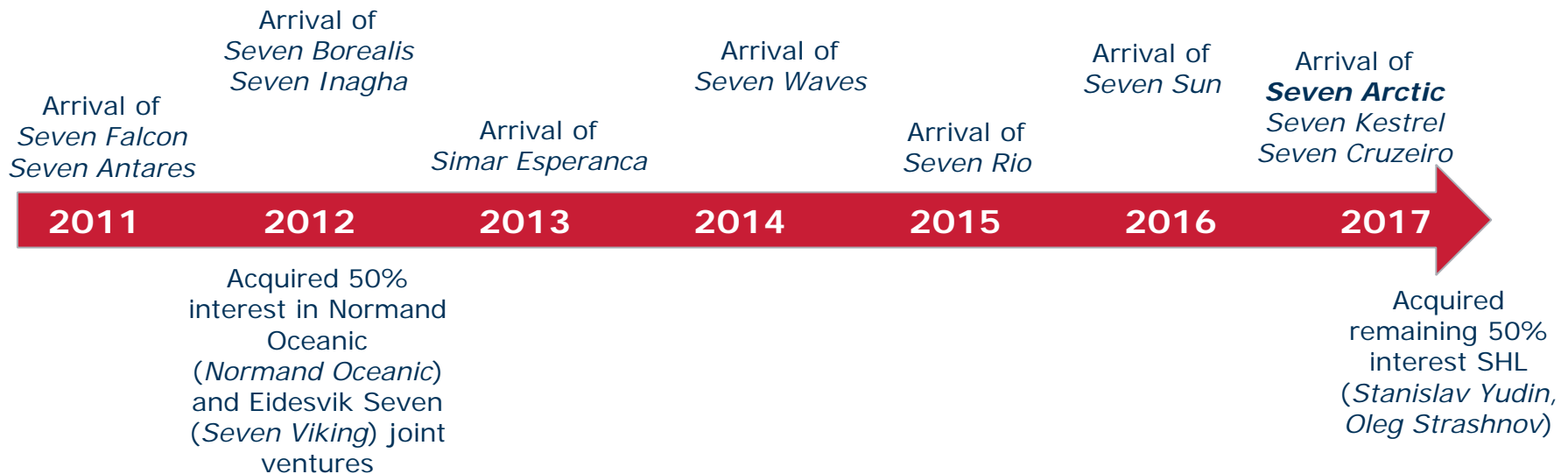


subsea 7



seabed-to-surface

Investing in a modern and differentiated fleet



Positioning for the Long-Term - Investment

New-build Vessel Programme

- Six vessel new-build programme completed in January 2017
- Total cost <\$1.9 billion
- Four high-specification flex-lay vessels on long term contracts with Petrobras
- ***Seven Arctic*** and *Seven Kestrel* to commence operations in the North Sea in April 2017



Introducing *Seven Arctic*

- First vessel of its kind in our fleet, unique to our fleet, custom designed
- Tilttable lay system that is adaptable to enable suitable approach angle for flex-lay, preventing damage to product at different water depths
- Main crane: adaptable operating modes and configurations e.g. 1000t, 660t, 330t to suit scope of work
- Versatility offers clients more options
- Single vessel with broad capability - can undertake work of 2-3 vessels
- Offers more capability/flexibility than some of our other vessels





Jonathan Tame
VP Offshore Resources

Seven Arctic: Vessel Specification

Seven Arctic is a construction vessel suitable for worldwide operations, adapted for both tropical and winter environments, capable of operations in water depths up to 3,000m.

- Length 162.3m x breadth 32.0m
- 1,000t AHC Offshore Crane
- 600t top tension (tiltable) lay system
- 7,000t underdeck basket carousel
- Accommodation for 132 persons
- Deck Area c. 2,600m²
- DP Class III with two engine rooms
- Deck load of 5,400t at 5m above main deck
- Special Purpose Ship code compliant
- Transit speed 15 knots
- Twin work-class ROVs



Seven Arctic: Design and Build

- The commitment to build such a vessel is based on a sound business case considering the market, Subsea 7's existing fleet, technology, cost and return on investment.
- The project commenced in 2012 with market analysis, specification development and tendering activities.
- The key requests that emerged from this process were :-
 - Modern International ship with high load carrying capabilities, good transit speed and able to operate in harsh environments (including winterisation).
 - 1,000t crane with high performance load to depth lifting capability
 - Large, 7000t capacity below deck carousel.
 - Flexible lay system, originally 325t was anticipated, however 600t requirement was identified and is included.
 - Advanced and integrated ships safety system covering fire and flood alarms (K-safe).
 - Meeting high environmental standards (TIER III NOX and SOX).

Seven Arctic: Commercial Advantages



- Product carrying capability:
 - 7,000te underdeck is largest in Subsea 7 fleet.
 - Still have ability to load 4,000 tonnes on deck with underdeck carousel full.
 - Large uncluttered deck space.
- Flexibility in supporting multiple scopes on deck in minimised number of trips.
- High top tension capability or utilisation of high track length available from either single or dual tensioner configuration.
- Crane capability – 500te, triple fall to 1900m.
- High transit speed.

Seven Arctic - Built by Hyundai Heavy Industries, South Korea (May 2013 – Jan 2017)

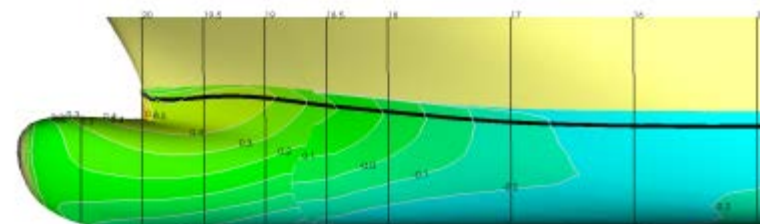
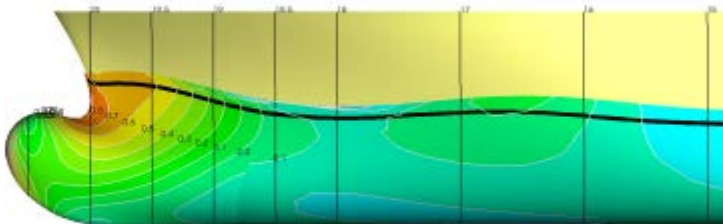
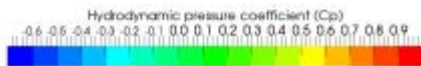
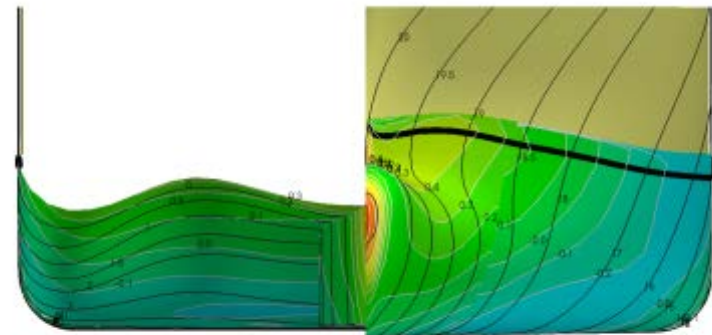
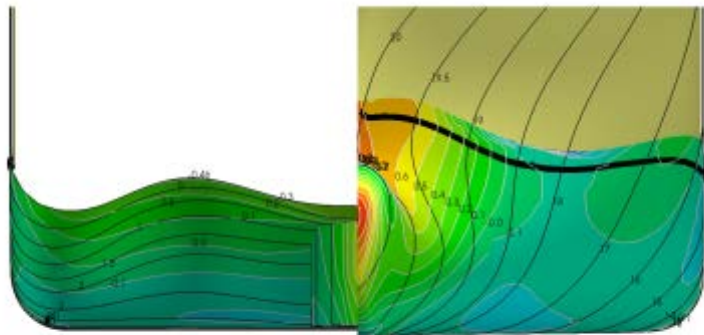


- HHI, South Korea – the worlds biggest shipyard
- SNSD – Special Naval and Ships Division
- Huisman – builder of Lay Tower and crane

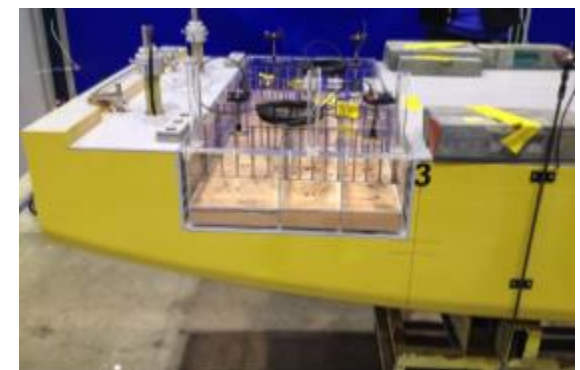
Seven Arctic: Design Phase – Hull Optimisation for Speed

- Pressure Distribution – Original Hull Lines

- Pressure Distribution – Version C Hull Lines



Seven Arctic: Marin Tank Trials



Seven Arctic: Hull Construction – Optimal for Speed



Key Features: Power

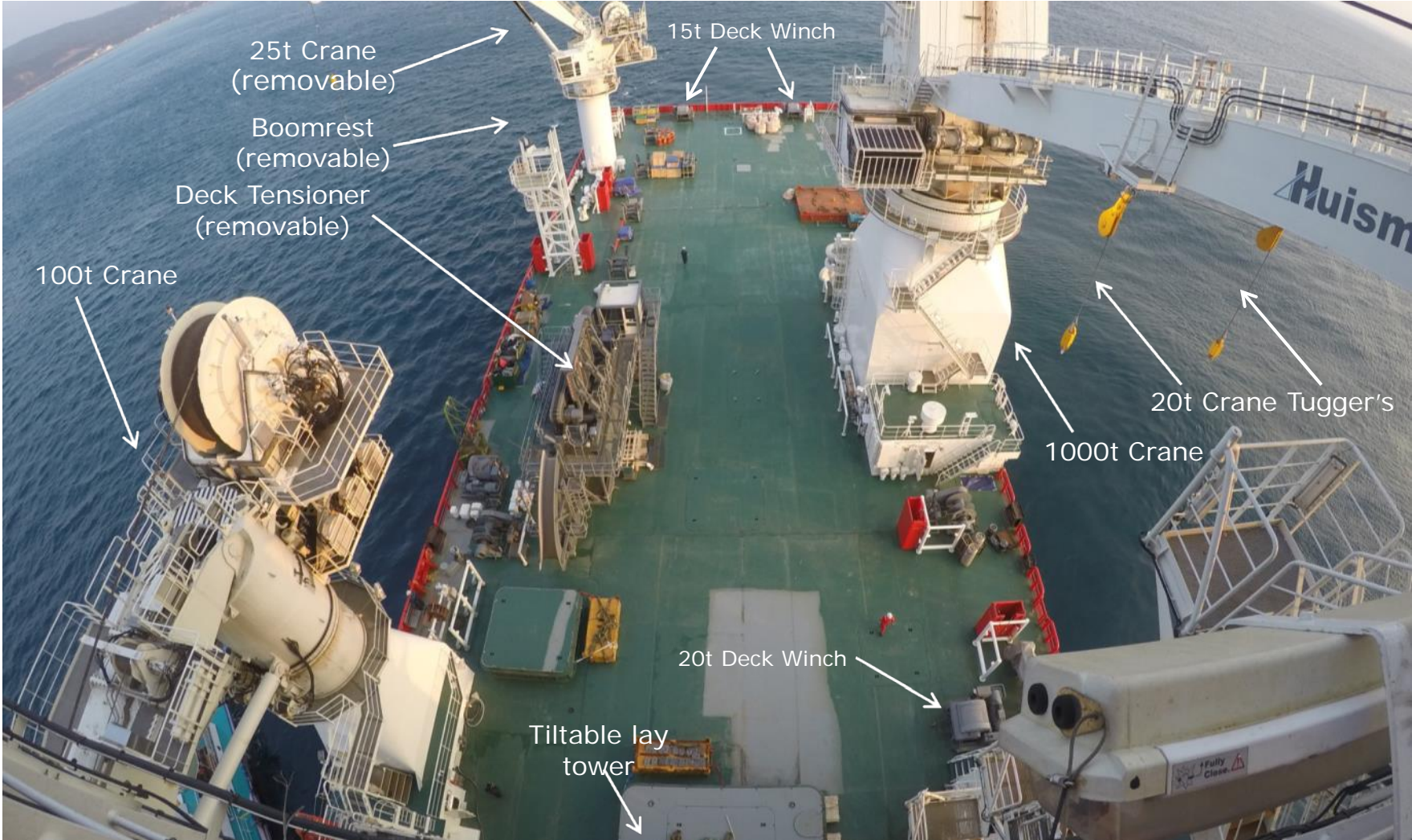
- Engine Rooms: 2
- Main Engines: 6 x HiMSEN 9H32/40 Power: 4,500kW
- Generators: 6 x HHI HSJ7 915-10P Power: 4,220kW
- Propulsion: 2 x Controllable pitch propeller shafts Power: 9,200kW
- Thrusters: 4 x Tunnel Thruster (2 Fwd, 2 Aft) Power: 2,600kW
- Azimuths: 2 x Retractable Azimuth Thruster (Fwd) Power: 2,300kW



Seven Arctic: Configured for Operational Efficiency



Seven Arctic: Multiple Deck options



Seven Arctic: 600te Tilttable Lay System



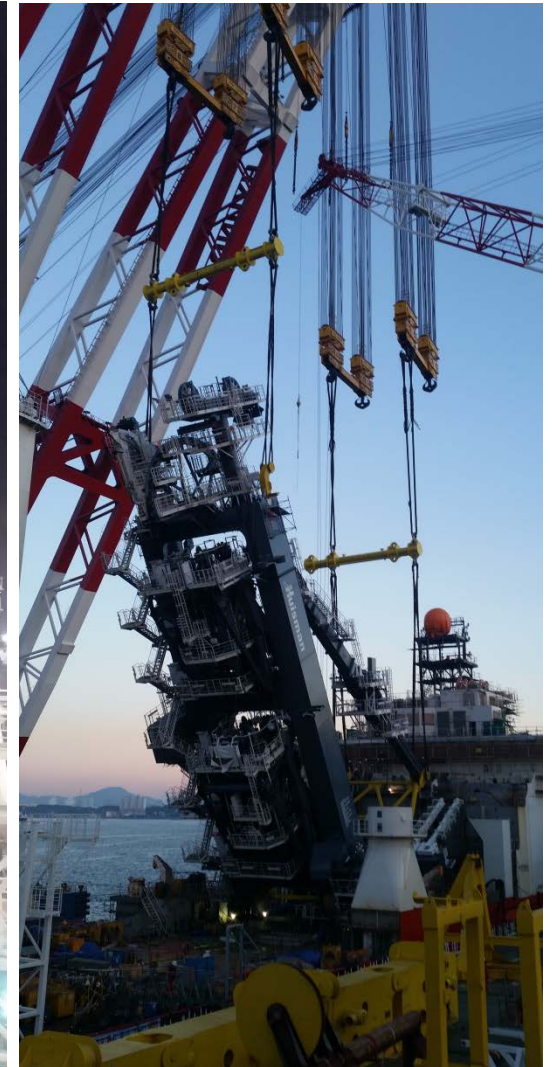
Build



After

- Tensioners: 2
- Dynamic Top Tension: 600t
- Primary A&R Capacity: 600t
- Primary A&R Wire Length: 3,500m
- Secondary A&R Capacity: 200t
- Secondary A&R Wire Length: 3,000m
- Hang Off Clamp: 600t
- PLET Handling System: 50t
- Lay System Working Angles: 90° to 80°
- Lay System Bridge Passage Angle: 39°

Seven Arctic: TLS Installation



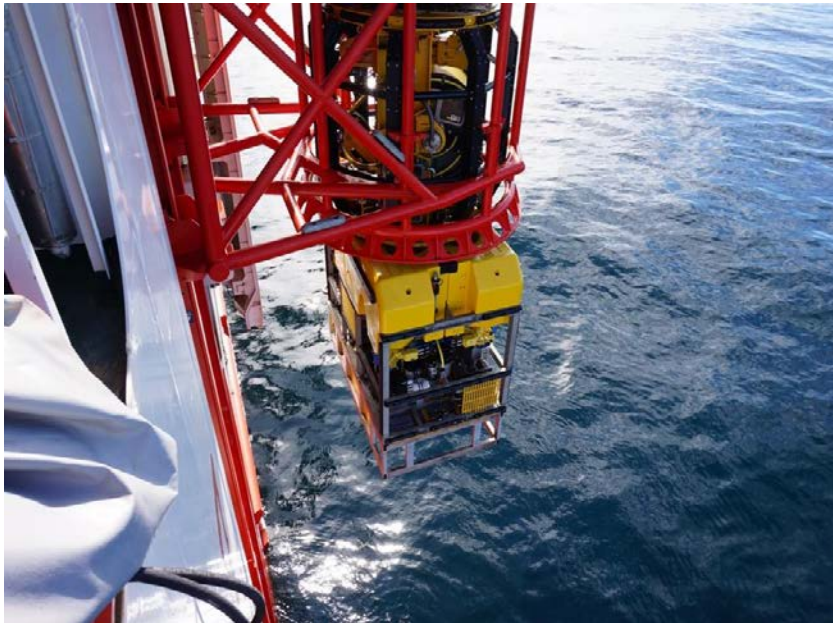
Seven Arctic: Main Crane 1,000t RL KBC

Key Features

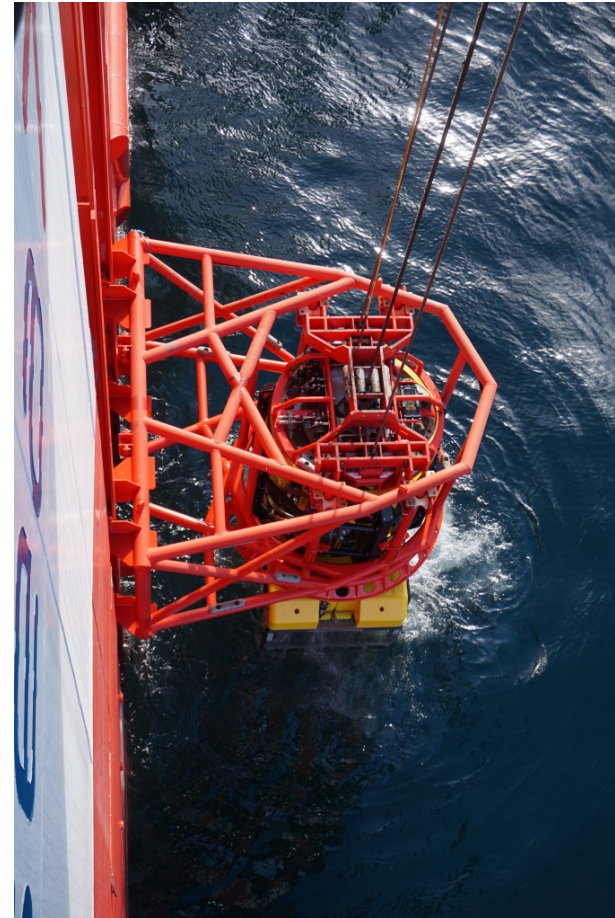
- Light-weight knuckle boom, to maximise deck coverage and hook height.
 - High subsea lift capability.
 - Active Heave Compensation; with high speed winches.
 - Double crane cab for training purposes.
- Main Crane
 - Operates in Single, Double and Triple Fall
 - Weight: 1825Te
 - Installed Power: 5600kW
 - Mast Height: 42m
 - Main Boom: 37m
 - Knuckle Boom: 21m
 - 6000m, 109mm wire
 - Heave Compensated



Seven Arctic: WROV's

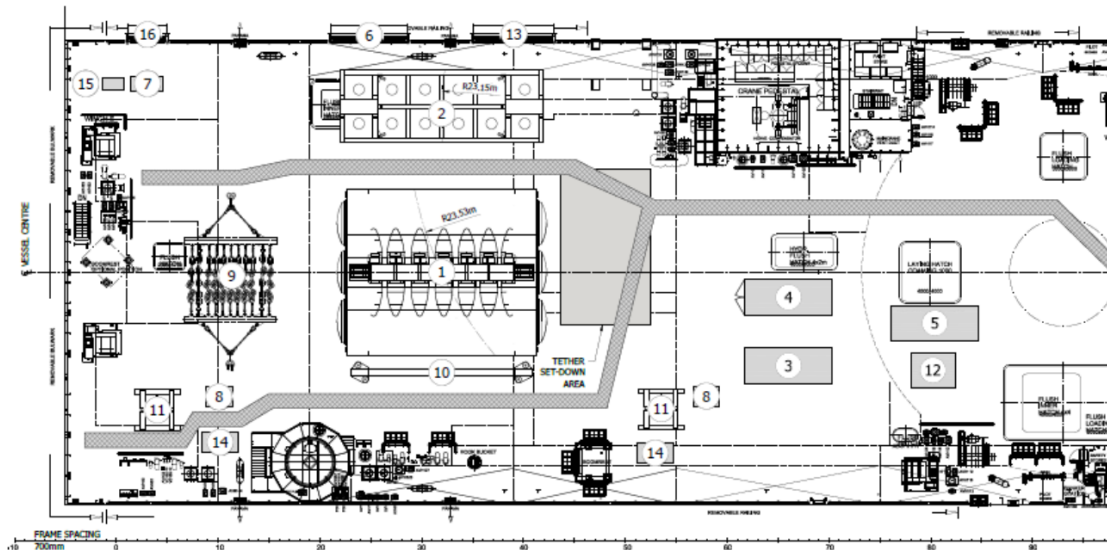


- Two workclass ROV's installed in "hangers"
- Deployed via cursors, over the side
- Operating sea state 5.5m sig wave height
- Max operating depth 3000 mtrs



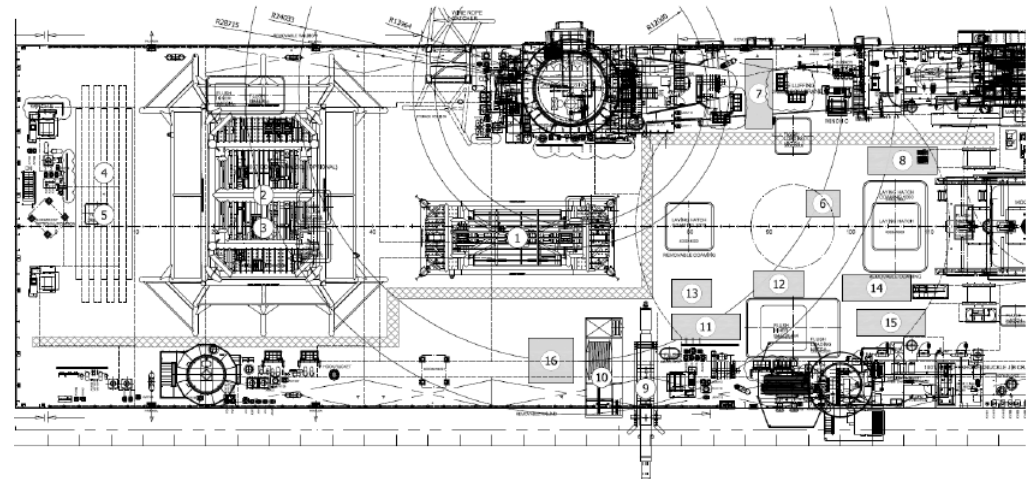
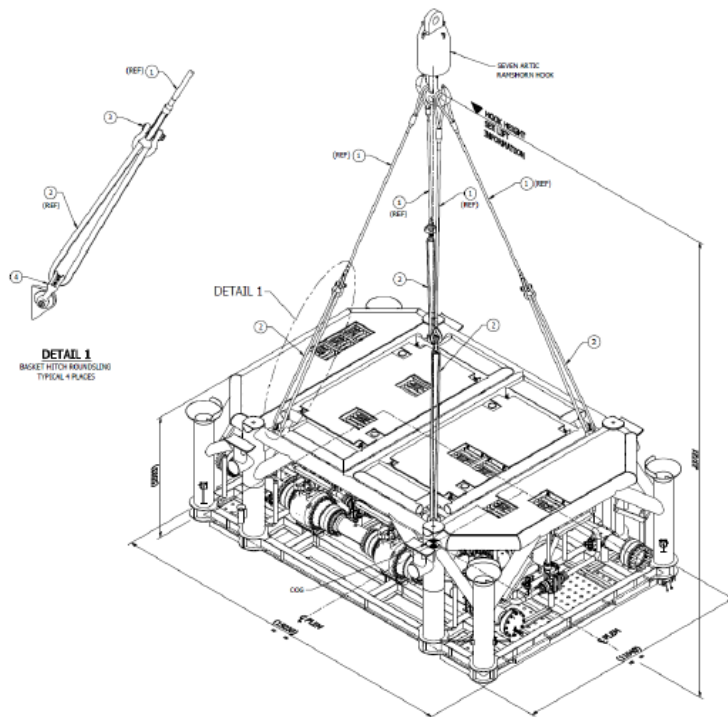
Seven Arctic: Work in Hand

- Mid water arch (~165te) and gravity base installation. 165m Water depth.
- Well within capacity of 1000te crane in just single fall mode.
- Highly weather sensitive scope – normally executed in Summer months, operability of vessel will improve efficiency.
- Large available deck space minimises number of trips and ability to mobilise for multiple activities.



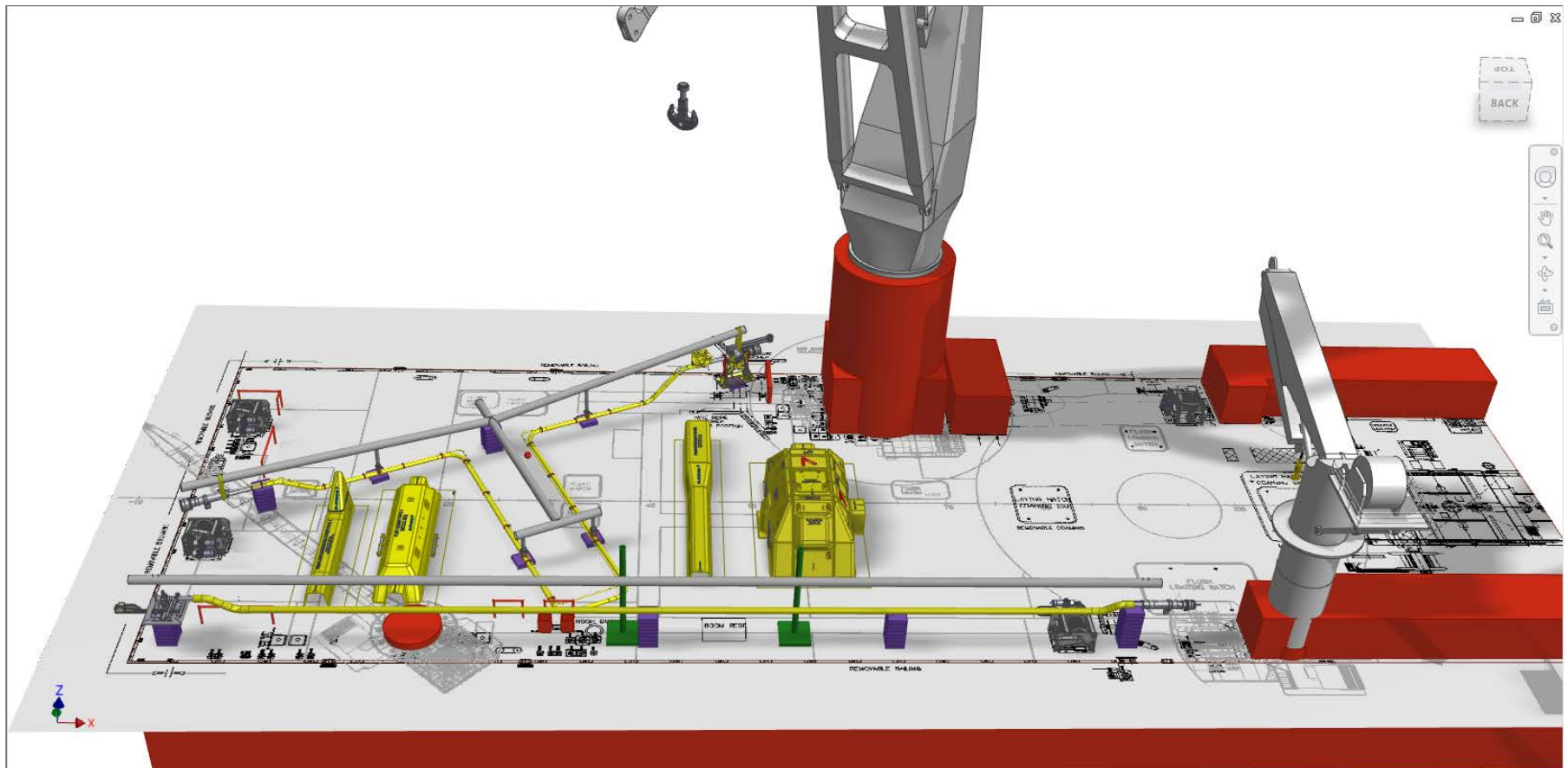
Seven Arctic: Work in Hand - Maersk Culzean

- Structures (range 100-200te) and piling scope.
- Well within capacity of 1000te crane in just single fall mode.
- Large available deck space minimising number of trips and ability to mobilise for multiple activities.

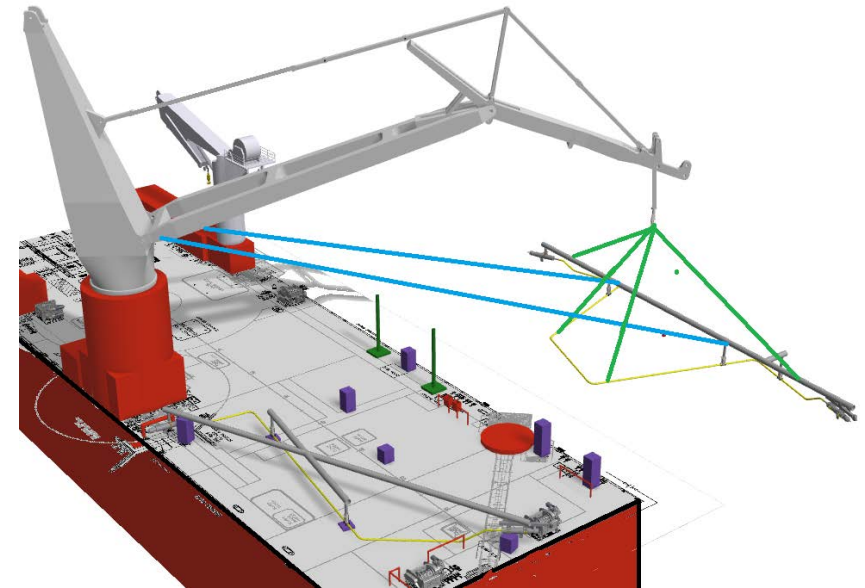
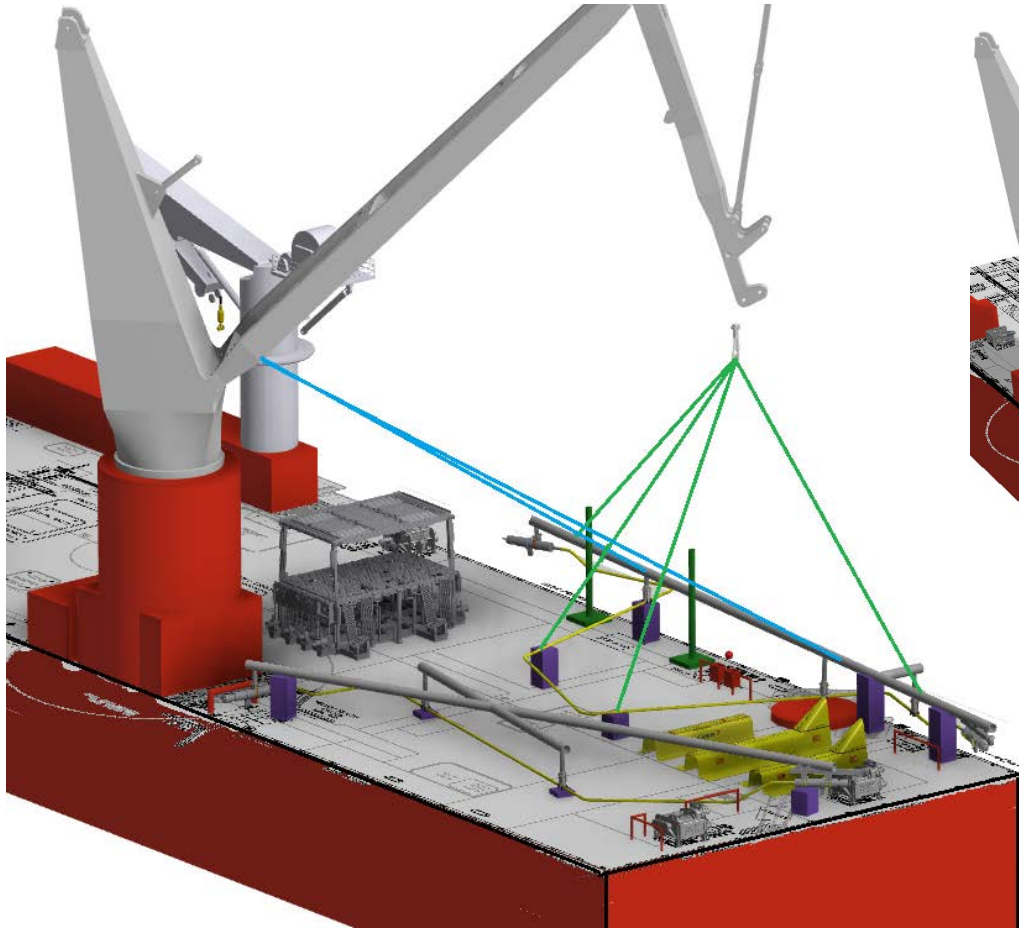


Seven Arctic: Work in Hand - Wintershall Maria Project

-Structures, Spools, Flexible product and general construction/ installation scope – wells suited to mission equipment of Seven Arctic.



Seven Arctic: Work in Hand - Wintershall Maria Project



Crane capability (available capacity, radius and hook height) allows flexibility in deployment – the above spool planned for deployment on vessel starboardside for ease.

Seven Arctic: Operations

- Manning levels onboard will vary dependent on the particular project.
- Accommodation is available for 132 personnel, in single and two man cabins.
- The ship will normally operate at less than that, typically :-

➤ Marine officers and crew	38 - 42
➤ Catering	11 - 13
➤ Operations personnel	35 - 45
➤ WROV personnel	12
➤ Survey	3
➤ Project engineers	3
➤ Clients	3 - 8
<u>Total</u>	<u>105 - 126</u>



Seven Arctic: Tour highlights / key stations

- Guests will be divided into groups, led by key personnel from the ship, most of which were involved in the build process.
- Areas visited will include :-
 - Main deck
 - Below deck carousel and winches
 - Engine control room, switchboard room and engine rooms
 - Accommodation, offices, conference room and hospital
 - WROV hangar and control room
 - Mess room and common areas
 - Clients offices
 - Fore and Aft bridges
 - Emergency bridge and helideck
 - TLS walkway.
- Please stick to your allocated group.

Appendix

Seven Arctic: Ulsan, South Korea Shipbuilding in Dry-Dock



Seven Arctic: Underdeck A&R and Main Crane Storage Winches

- Preparations for spooling A&R wires
- Main crane storage winch (6,200m wire installed)



Seven Arctic: 100mt KBC Installation



Seven Arctic: Switchboard Rooms and Mission Equipment E-Rooms (Build and After)



Seven Arctic: WROV Hanger and Control Room (Build and After)



Seven Arctic: Navigation Bridge & DP Bridge (Build and After)



Seven Arctic: Helideck Installation



Seven Arctic: Sea Trials - completed in South Korea





seabed-to-surface

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